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REMARKS

Claims 1 and 4-23 are currently pending in the subject application and are presently under consideration. It is appreciated that claims 11-23 have been allowed. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein.

I. Rejection of Claim 1 and 4-10 Under 35 U.S.C. §103(a)

Claims 1 and 4-10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wolf (US 6,385,751 B1) in view of McSpadden (US 4,216,540). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Wolf and McSpadden individually and in combination, do not teach or suggest all limitations as recited in the subject claims.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §706.02(j).

Independent claim 1 recites a general-purpose direct memory access (DMA) controller and an arithmetic circuit that is coupled to receive data from the DMA. (page 5, lines 1-3). To facilitate a robust means of communication with the resources, the arithmetic circuit provides error checking based on data received from the DMA and on a polynomial equation. (page 5, lines 4-5). This arithmetic circuit is a linear feedback shift register which includes a plurality of programmable feedback points. Such feedback points determine the form of a polynomial used in the polynomial equation. Wolf in combination with McSpadden does not teach or suggest such limitations of the claimed subject invention.

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In particular, Wolf does not teach or suggest an arithmetic circuit employed to provide error checking *based on data received from the DMA controller* as recited in the subject claim. In the Office Action dated March 16, 2004, Examiner cites col. 3, lines 24-27 and col. 5, lines 16-26 of Wolf which disclose a Reed-Solomon encoder. Such an encoder employs a code generator polynomial to locate, quantify and extract errors contained in digital signals. However, Wolf does not mention generating an error checking value *based on data received from the DMA controller*. The cited passage in Wolf is directed to changing a code generator polynomial by varying the value of a variable, j_0 . However, Wolf does not teach or suggest that j_0 is dependent on data received from any source, let alone *dependent on data received from the DMA controller*, as recited in the subject claim.

The Court of Appeals for the Federal Circuit (CAFC) holds that "anticipation is established *only if* (1) *all the elements* of an invention, *as stated in a patent claim*, (2) *are identically set forth*, (3) in a single prior art reference." See *Gechter v. Davidson*, 116 F.3d 1454, 1457 (Fed. Cir. 1997) ("Under 35 U.S.C. §102, every limitation of a claim must *identically* appear in a single prior art reference for it to anticipate the claim.") (Emphasis added); *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990) ("For a prior art reference to anticipate in terms of 35 U.S.C. §102, every element of the claimed invention must be *identically* shown in a single reference.' These elements must be *arranged as in the claim under review...*") (Emphasis added) (Citations omitted); *Lindemann Maschinenfabrik GMBH v. American Hoist*, 730 F.2d 1452, 1458 (Fed. Cir. 1984) ("Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim*." (Emphasis added); *Connell v. Sears, Roebuck & Co.* 722 F.2d 1542, 1548 (Fed Cir. 1983) ("Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention *arranged as in the claim*. A prior art disclosure that 'almost' meets that standard ... does not 'anticipate.'") (Emphasis added) (Citations omitted). Thus, pursuant 35 U.S.C. §102, a reference must teach each and every element as identically shown, or as arranged in the claim in order to anticipate.

Furthermore, Examiner cites Wolf col. 8, lines 30-31 to teach a process step wherein data is received from the DMA. However, simply stating that data is received

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from the DMA is of no consequence when the data received is unrelated to the value of j_0 and how the code generator polynomial value is modified. "It is not sufficient that each element be found somewhere in the reference, the elements must be '*arranged as in the claim.*'" *Novo Nordisk A/S v. Becton Dickinson and Co.*, 96 F.Supp.2d 309, (S.D.N.Y. 2000) citing *Lindemann* 730 F.2d at 1458 (Emphasis added). Moreover, "absence from the reference of any claimed element negates anticipation." *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1571 (Fed. Cir. 1986). Thus, Wolf does not meet the requirements pursuant to §102. Accordingly, it follows Wolf cannot be an obvious variation of §102 prior art as required by 35 U.S.C. §103 and a nonobviousness rejection under 35 U.S.C. §103 is improper.

Furthermore, there is no teaching, suggestion or motivation in Wolf or McSpadden to combine the subject references to teach a *programmable* linear feedback shift register (LSFR); a teaching or suggestion to make the claimed combination and a reasonable expectation of success must both be found in the prior art, not in applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); the mere fact that references can be modified does not render the modification obvious unless the cited art also suggests the desirability of the modification. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Examiner states that the motivation to combine to teach a *programmable* LSFR is obvious to one skilled in the art since it would provide the opportunity to implement the programmable arithmetic unit in Wolf. However, the rationale proffered by the Examiner relies upon a faulty premise since Wolf employs a *non-programmable* LSFR. Thus, the programmable arithmetic unit functions without the need or motivation to utilize a programmable LSFR and Wolf actually teaches away from the subject invention.

It appears that 20/20 hindsight is being impermissibly employed with applicants' specification as a roadmap to make the purported combination; the rationale proffered to modify and combine Wolf and McSpadden is to achieve benefits identified in applicants' specification, which overcome problems associated with conventional systems and/or methods. Applicants' representative respectfully submits that this is an unacceptable and improper basis for a rejection under 35 U.S.C. §103. In essence, this rejection is based on an assertion that it would have been obvious to do something not suggested in the art

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because so doing would provide advantages stated in applicants' specification. This sort of rationale has been condemned by the Court of Appeals for the Federal Circuit. *See, for example, Panduit Corp. v. Dennison Manufacturing Co.*, 1 USPQ2d 1593 (Fed. Cir. 1987).

In addition, the motivation stated by the Examiner that such a modification would "provide the opportunity to implement the programmable arithmetic unit" is inadequate. Just because it is possible to try combinations of elements to recreate the subject invention does not meet the standard pursuant to 35 U.S.C. §103 of nonobviousness. Stating that such a modification would be obvious to try to modify Wolf to teach the subject invention is inadequate to establish a *prima facie* case of nonobviousness. "Obvious to try" is not the standard of 35 U.S.C. §103. A disregard for unobviousness of results of "obvious to try" experiments disregards "invention as a whole" concept of Section 103. *In re Goodwin*, 576 F.2d 375, 198 USPQ 1 (CCPA 1978). The standard of 35 U.S.C. §103 is not that it could be obvious for one skilled in the art to try. Over emphasis on routine nature of data gathering required to arrive at applicant's discovery, after its existence became expected, overlooks the last sentence of Section 103. *In re Antonie*, 559 F.2d 618, 195 USPQ2d 6 (CCPA 1977). There is usually an element of obviousness to try in any research endeavor...[p]atentability based on that as a test would be contrary to the statute. *In re Tomlinson*, 363 F.2d 928, 150 USPQ 623 (CCPA 1966).

Accordingly, for the aforementioned reasons, it is submitted that the combination of Wolf and McSpadden do not make the applicants' invention obvious as recited in claim 1 (or claims 4-10 which depend therefrom) and this rejection should be withdrawn.

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II. Conclusion

The present application is believed to be in condition for allowance in view of the above comments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number listed below.

Respectfully submitted,

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